

### **REMARKS**

Claims 7-24 are all the claims presently pending in the application. Claims 7-8 and 15-16 have been amended to more particularly define the invention. Claims 21-24 have been added.

It is noted that the claim amendments are made only for more particularly pointing out the invention, and not for distinguishing the invention over the prior art, narrowing the claims or for any statutory requirements of patentability. Further, Applicant specifically states that no amendment to any claim herein should be construed as a disclaimer of any interest in or right to an equivalent of any element or feature of the amended claim.

Claims 7-10, 15 and 16 stand rejected under 35 U.S.C. § 112, first paragraph as allegedly failing to comply with the written description requirement.

Claims 7 and 9 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Noma et al. (JP 05-242891).

Claims 7-10 and 15-18 stand rejected under 35 U.S.C. § 102(b) as being allegedly anticipated by Fujimoto et al. (US 2003/0180617).

Claims 11-14 and 19-20 stand rejected under 35 U.S.C. § 103(a) as being allegedly unpatentable over Numata et al. (JP 2000-077071) in view of Fujimoto.

These rejections are respectfully traversed in view of the following discussion.

#### **I. THE CLAIMED INVENTION**

An exemplary aspect of the claimed invention (e.g., as recited in claims 7 and 8) is directed to a positive active material including a composite oxide which includes lithium (Li), manganese (Mn), nickel (Ni), cobalt (Co), and oxygen (O) and is represented by the following chemical composition formula:  $\text{Li}_a\text{Mn}_b\text{Ni}_c\text{Co}_d\text{O}_e$ .

Importantly, in this exemplary aspect of the claimed invention, the composite oxide includes a single-phase structure belonging to space group R3-m (Application at page 46, lines 23-25).

Another exemplary aspect of the claimed invention (e.g., as recited in claims 11 and 12) is directed to a non-aqueous electrolyte battery, including a positive electrode which includes a

lithium-manganese oxide (A) having a spinel structure and represented by the general formula  $\text{LiMn}_2\text{O}_4$  and a lithium-nickel-manganese-cobalt composite oxide (B) having an  $\alpha\text{-NaFeO}_2$  layer structure and represented by the general formula  $\text{Li}_a\text{Mn}_b\text{Ni}_c\text{Co}_d\text{O}_e$ .

Importantly, in this exemplary embodiment, a weight ratio of (A) to (B) is in a range from 5:95 to 10:90 (Application at page 83, lines 18-22).

Another exemplary aspect of the claimed invention (e.g., as recited in claims 19 and 20) is directed to a non-aqueous electrolyte battery, including a positive electrode, a negative electrode, and a non-aqueous electrolyte. The positive electrode includes a lithium-manganese oxide (A) having a spinel structure and represented by the general formula  $\text{LiMn}_2\text{O}_4$ .

Importantly, the positive electrode also includes a lithium-nickel-manganese-cobalt composite oxide (B) having an  $\alpha\text{-NaFeO}_2$  layer structure and represented by the general formula  $\text{Li}_a\text{Mn}_b\text{Ni}_c\text{Co}_d\text{O}_e$ , where  $0.9 \leq d < 1$  and  $b < 0.05$  (Application at page 16, lines 14-19)

## **II. THE 35 U.S.C. § 112, FIRST PARAGRAPH REJECTION**

The Examiner alleges that claims 7-10, 15 and 16 do not comply with the written description requirement.

Applicant notes that these claims have been amended to address the Examiner's concerns. Thus, Applicant respectfully submits that these claims clearly comply with the written description requirement.

In view of the foregoing, the Examiner is respectfully requested to withdraw this rejection.

## **III. THE ALLEGED PRIOR ART REFERENCES**

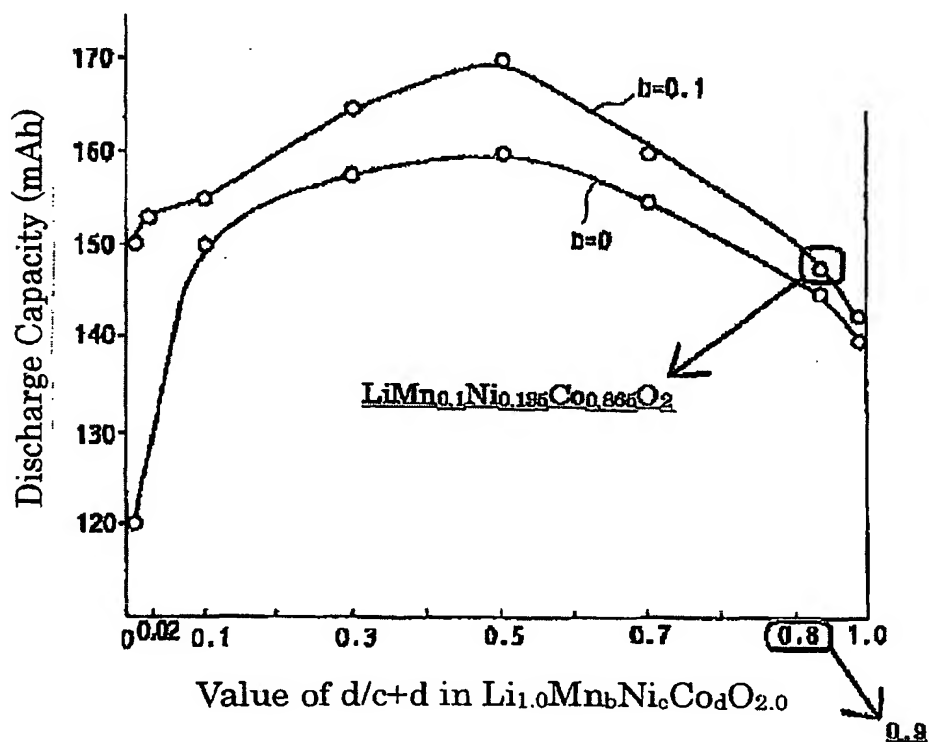
### **A. Noma**

The Examiner alleges that Noma teaches the invention of claims 7 and 9. Applicant submits, however, that there are features of the claimed invention that are not taught or suggested by Noma.

In particular, Applicant submits that Noma does not teach or suggest a composite oxide having the formula  $\text{Li}_a\text{Mn}_b\text{Ni}_c\text{Co}_d\text{O}_e$  "wherein said composite oxide comprises a single-phase structure belonging to space group  $R3-m$ ", as recited in claim 7.

Clearly, this feature is not taught or suggested by Noma.

Indeed, Applicant would point out that in Fig. 2 of Noma et al. shown below, there is a mark (---o---) at a position corresponding to " $b=0.1$ ,  $d/c+d=0.95$ " as a Comparative Example.



Applicant notes that the composition of this point corresponds to  $\text{LiMn}_{0.1}\text{Ni}_{0.135}\text{Co}_{0.865}\text{O}_2$ .

However, even assuming (arguendo) that this composition overlaps with range of Claim 7 or 9 in the claimed invention, Applicant submits that when  $\text{LiMn}_{0.1}\text{Ni}_{0.135}\text{Co}_{0.865}\text{O}_2$  is synthesized according to the synthesizing procedure as described in the working example of Noma, a

**composite oxide to be obtained does not satisfy the requirement of "having a single-phase structure belonging to the space group R3-m".** (Incidentally, it is clear that the numerical value for the scale on the abscissa axis in Fig. 2 of Noma et al (JP05-242891) should be "0.9", not "0.8", as hand-revised in Fig. 2 shown above.)

Submitted herewith is the Declaration of inventor Daisuke ENDO which clearly evidences that the  $\text{LiMn}_{0.1}\text{Ni}_{0.135}\text{Co}_{0.865}\text{O}_2$  synthesized according to the synthesizing procedure as described in the working example of Noma does not have a single-phase structure.

Therefore, Noma clearly does not teach or suggest a composite oxide which includes a single-phase structure belonging to space group R3-m, as in the claimed invention.

Therefore, Applicant respectfully submits that Noma does not teach or suggest the features of the claimed invention. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### **B. Fujimoto and Numata**

The Examiner alleges that Fujimoto teaches the invention of claims 7-10 and 15-16. However, Applicant submits that there are features of the claimed invention that are not taught or suggested by Fujimoto.

Further, although there are features of the claimed invention that are not taught or suggested by Fujimoto, in order to expedite prosecution, Applicant notes that the features of claims 7-10 and 15-16 are disclosed in Japanese Patent Application No. P2002-0088229 which was filed on March 27, 2002 and to which the present Application claims priority. That is, the present Application has a foreign priority date (March 27, 2002) which is prior to the U.S. filing date (March 19, 2003) of Fujimoto. Submitted herewith is a verified English translation of the priority document.

Therefore, Applicant respectfully submits that Fujimoto is not prior art against the present Application. Therefore, the Examiner is respectfully requested to withdraw this rejection.

**C. Numata**

The Examiner alleges that Numata would have been combined with Fujimoto to form the invention of claims 11-14 and 19-20. However, Applicant submits that Numata would not have been combined with Fujimoto and even if combined, alleged combination would not teach or suggest the features of the claimed invention.

In particular, in Paragraph 10 on pages 4-5 of the Final Office Action, the Examiner alleges that Numata discloses a lithium-manganese oxide (A) and a lithium-nickel-manganese-cobalt composite oxide (B) as in the claimed invention. However, this is completely unreasonable.

Indeed, Applicant would again point out to the Examiner that the proportions of (A)  $\text{LiMn}_2\text{O}_4$  in a mixture of (A)  $\text{LiMn}_2\text{O}_4$  and (B) lithium nickel complex oxide as shown in Numata are extremely high, such as 90, 85, 80 and 70%. On the other hand, the proportion of (A)  $\text{LiMn}_2\text{O}_4$  in a mixture of  $\text{LiMn}_2\text{O}_4$  and (B) lithium-nickel-manganese-cobalt complex oxide as defined in Claims 11 to 14 in the present application are 5 and 10%, which is completely different from and unrelated to the proportion as described in Numata.

Accordingly, we believe that the present invention which takes an effect of having the excellent high-rate discharge performance by the constitution of Claims 11 to 14 of the present application is unobvious over the combination of Numata and Fujimoto, even if Fujimoto would be effective as a cited reference.

Applicant respectfully requests that the Examiner **carefully consider the fact that the (A)  $\text{LiMn}_2\text{O}_4$  proportion of 5 to 10% as defined in Claims 11 to 14 of the present application are completely different from and unrelated to the proportion as described in Numata.**

Further, as noted above, Fujimoto is not prior art against the present Application. Therefore, the Examiner is respectfully requested to withdraw this rejection.

#### IV. FORMAL MATTERS AND CONCLUSION

In view of the foregoing, Applicant submits that claims 7-24, all the claims presently pending in the application, are patentably distinct over the prior art of record and are in condition for allowance. The Examiner is respectfully requested to pass the above application to issue at the earliest possible time.

Should the Examiner find the application to be other than in condition for allowance, the Examiner is requested to contact the undersigned at the local telephone number listed below to discuss any other changes deemed necessary in a telephonic or personal interview.

The Commissioner is hereby authorized to charge any deficiency in fees or to credit any overpayment in fees to Attorney's Deposit Account No. 50-0481.

Date: 9/25/08

Respectfully Submitted,

  
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